

APPENDIX C: REFERENCES

Document and Internet Resources:

CH2M Hill. Appendix G, Technical Memorandum 7.5, Spokane County Protection Policies Assessment, Amended Feb., 1999

Central Valley School District #356. Capital Facilities Plan 2005-06 through 2010-11, 2006

City of Liberty Lake. City of Liberty Lake Comprehensive Plan 2003-2022, 2003

City of Liberty Lake. City of Liberty Lake Development Code, 2005

City of Liberty Lake Planning & Community Development Department. 2006 Statistical Snapshot, updated Oct. 2006

City of Liberty Lake Planning & Community Development Department. 8/1/06 City Land, Population, and Zoning Inventory

City of Liberty Lake Steering Committee. Land Quantity Analysis & Urban Services Report for Population Allocation, June 2004

Liberty Lake Sewer and Water District. History of the Liberty Lake Sewer and Water District, www.libertylake.org, accessed Oct. 2006

MacInnis, J.D., Blake, J., Painter, B., Buchanan, J.P., Lackaff, B.B., Boese, R., The Spokane Valley-Rathdrum Prairie Aquifer Atlas, 2004 Update

Northwest Power and Conservation Council. "Section 24: Spokane Subbasin Assessment: Terrestrial Resources", 2003

Ruen-Yeager & Associates, Inc. Preliminary Planning & Buildout Study, Aug. 2006

WA Department of Ecology. Introduction to Washington's Shoreline Management Act (RCW) 90.58, Dec. 1999

WA Department of Fish and Wildlife. Goals and Objectives for Habitat Protection and Enhancement in the Spokane River Hydroelectric Project Area- Management Planning Framework, 2004

WA Department of Ecology. 2004 Water Quality 303(d)-5 List for: Middle Spokane Water Resource Inventory Area (WRIA) 57 (updated 1/5/06)

Spokane County Board of County Commissioners. Resolution 6 0714 in the Matter of Screening and Evaluation Criteria for the Spokane County Comprehensive Plan Update, Aug. 2006

Spokane County Department of Building and Planning. Draft Revised Shorelines Program, accessed at <http://www.spokanecounty.org/bp/documents/shorelines/default.asp> , Oct. 2006

Spokane County Department of Building and Planning. Shorelines Program, accessed at <http://www.spokanecounty.org/bp/documents/shorelines/default.asp> , Oct. 2006

Spokane County Department of Building and Planning. Capital Facilities Plan Draft 2006 Update

Spokane County Division of Long range Planning. Spokane County Interim Urban Growth Area Final Environmental Impact Statement, Dec. 1996

Westerlund, Frank. Wildlife Corridors and Landscape Linkages- An Approach to Biodiversity Planning for Spokane County, Washington, Jan. 25, 1998

<http://terraserver.homeadvisor.msn.com> accessed Oct. 2006

<http://soils.usda.gov> accessed Oct. 2006

<http://criticalhabitat.fws.gov/> accessed Oct. 2006

Personal Contacts:

Adams, BiJay. Lake Protection Manager, Liberty Lake Sewer and Water District

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Divens, Karin. PHS/GMA Biologist, WA State Department of Fish and Wildlife

Edgar, Ron. Chief of Technical Services, Spokane County Air Pollution Control Authority

Freir, Rick. Inspector, Spokane Valley Fire Department #1

Hunt, Bruce. Senior GIS Planner, Spokane County

Moody, Sandra. Natural Heritage Plant Division, WA State Department of Natural Resources

Westby, April. Environmental Engineer, Spokane County Air Pollution Control Authority

GIS MAP SOURCES:

Critical Aquifer Recharge Areas

This coverage maps Spokane County into areas of High (CARA), Moderate, or Low Aquifer Susceptibility. It is a combination of the ShADI aquifer susceptibility study and wellhead protection zones.

The SHADI data was created in 1998 by Spokane County Water Quality Management Program staff under the guidance of Program Director Stan Miller.

An Arc/Info GRID process was used to create an aquifer model using SHADI layers-- Soils, Hydraulic conductivity, Annual recharge, Depth to aquifer, and Importance of the vadose zone. (The SHADI model was based on the USGS DRASTIC aquifer model, except revised by Stan Miller to reflect unique local conditions) Model results were submitted to the Critical Aquifer Recharge Area Committee as part of the Growth Management process. The CARA committee reviewed SHADI results, compared SHADI to aquifer nitrate data, and determined where to label areas in Spokane County as High, Moderate or Low aquifer susceptibility.

In 2003, at the request of Spokane County Long Range Planners, the SHADI high susceptibility areas were augmented with wellhead protection zones (WHPZ), using a dataset of all the Spokane County class A purveyor wells, identified and located by the Spokane Regional Health District.

All areas of high susceptibility on the SHADI map are considered a CARA, or Critical Aquifer Recharge Area (suscept : CARA). We described a wellhead protection zone for every well NOT already in a SHADI-CARA area. For every well possible, an engineered Wellhead Protection Zone was obtained from the purveyor, and included in the Cara_shd coverage. Where there are no available WHP zones, a circle with a 1000 foot radius around the well was used as a placeholder, until we obtain further information.

The SHADI data was created on a 300 foot GRID. The cara_shd coverage can only give a general (+/- 300 feet) idea of aquifer susceptibility. An engineering study must be run for specific information for any WHP zones that are in doubt.

For assistance with this layer, or to obtain a copy of the GIS Data Dictionary for this layer, please contact:

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DNR Streams

This export/shape file is updated yearly.

This layer is the recent State of Washington Department of Natural Resources stream layer, which has been updated by DNR for the entire County with new designations for stream types: S : Shoreline (old type 1 stream) 250' buffer; F : Fish (old type 2-3 streams) 100' buffer; N : Non Fish Perennial (old type 4 stream) 75' buffer; U : Non Fish Seasonal (old type 5 stream) 25' buffer connected to above stream-types; and X : No Designation (unclassified).

DNR Water Types classify streams, lakes, and ponds in Washington in relation to forest practices. Type code definitions were developed cooperatively by the departments of natural resources, fisheries, wildlife, and ecology, affected Indian tribes, private industry and environmental groups.

Old DNR water type reference (See Water Typing Criteria WAC 222 16 030 and Washington Forest Practices Rules and Regulations)

- 1 Type 1 251 Shorelines of statewide significance
- 2 Type 2 252 Waters of high use & importance in water quality
- 3 Type 3 253 Waters of medium use & importance in water quality
- 4 Type 4 254 Waters with influence on downstream water quality
- 5 Type 5 255 Waters not included in Types 1 through 4
- 9 UNCLASSIFIED 256 Unclassified stream

For assistance with this layer, or to obtain a copy of the GIS Data Dictionary for this layer, please contact:

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Erodible Soils

This export/shape file is updated yearly.

Erodible soils were derived from the Spokane County soils layer, created from Soil Conservation Service Soil Survey of 1968, with revision in 1975. This data is for use at the scale of 1:24000 or smaller. The erodible soils were selected based on the list of soil types from Appendix B of the Spokane County Critical Areas Ordinance. These are soil types with severe erosion potential.

For assistance with this layer, or to obtain a copy of the GIS Data Dictionary for this layer, please contact:

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Fire Districts

This export/shape file is updated monthly.

Spokane County fire district boundaries and associated attribute data.
The fire district layer was developed from legal descriptions from Boundary Review Board files. Various layers (parcels, sections) were used as a guide to align the district boundaries.

For assistance with this layer, or to obtain a copy of the GIS Data Dictionary for this layer, please contact:

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Geo Hazards

This export/shape file is updated yearly.

This layer is a selection of geologic formations identified by Washington State Department of Natural Resources and adopted into the Spokane County Critical Area Ordinance as having a high susceptibility for landslides. The origin of the data is from USGS at 1:24,000 scale for the urban area of the City of Spokane and Spokane County and 1:100,000 for the rural area. This information is used as a flag only and not a substitute for a field verification by a qualified landslide or erosion specialist.

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Major Roads

This export/shape file is updated monthly.

MAJORRDS is a line shapefile and is derived from various Spokane County and City of Spokane road layers. The Federal Functional Classification system is used as the basis for this layer. Roads identified as having the FUNCTION (FFC) values of 7, 8, 11, 12, 14, 16, and 17 are included. Major roads for Fairchild Air Force Base and cities with a population of less than 10000 are not included.

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Natural Resource Lands

This export/shape file is updated yearly.

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Spokane County Zoning

This export/shape file is updated weekly.

This Phase 2 Zoning layer is a continuous county-wide zoning layer built from verified Phase 1 zoning for the urban area and old township zoning from the rural areas, with Phase 2 zoning added. This layer should be used with the Comprehensive Plan and cross-over matrix of the June 1, 2004 Zoning Code to verify information in this layer. Alignment problems may be visible in some areas of this layer due to changes in the parcel and road layers, which are continually updated to new GPS survey data.

WARNING: There may be conditions attached to a rezone. A Planner should always be consulted to verify the zoning, and land use regulations and conditions that may affect an individuals or entities area of interest prior to that individual or entity making any commitment regarding purchase or development of any property in Spokane County in the State of Washington.

Current Planning, 509-477-7200.

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Priority Habitats and Species, Critical Areas

This export/shape file is updated yearly.

PHS is a polygon coverage created from a region coverage provided by Washington Department of Fish and Wildlife for Priority Habitat and Species areas within Spokane County. This data and map are part of the County's Critical Areas Ordinance. Note: Polygons may contain more than one habitat type.

This map provides generalized information to aid in administration of the Critical Areas Ordinance. This map identifies the possible existence of fish and wildlife habitat areas. This map in conjunction with site visits and other information is the basis for requiring field investigations such as fish and wildlife management plans. In the event of conflict between the information shown on this map and information shown as a result of field investigations, the latter shall prevail.

Sensitive information (i.e. threatened and/or endangered species) is depicted on this map. These species are vulnerable to disturbance and harassment. Washington State Department of Fish and Wildlife requests you do not disseminate specific information as to their whereabouts.

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Liberty Lake Watershed Boundary – LLSWD

The boundary was originally established by Michael Kennedy Consulting Engineers CIRCA 1979. With the development of GIS, the boundary was further defined in 2002 by the LLSWD (BiJay Adams) using the basin contours provided by Spokane County.

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School Districts

This export/shape file is updated monthly.

The school district layer contains Spokane County school district boundaries and associated attribute data. Educational Services District No. 101 supplied the original source data on a county-wide base map. ESD 101 is the agency responsible for modification of the School district boundaries. The Boundary Review Board maintains the data as a courtesy to ESD 101.

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Sewer Basins

This export/shape file is updated daily.

Sewer Basin maps depict Utility Local Improvement Districts (ULIDs), either existing or proposed, in the Coordinated Wastewater Management Plan (CWMP) projected thru 2016. The boundaries are approximate and may change with further engineering. Basin priorities are subject to further review and may be changed before reaching final status.

For assistance with this layer, or to obtain a copy of the GIS Data Dictionary for this layer, please contact:

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Streams and Lakes

This export/shape file is updated monthly.

This layer represents the line version of streams and lakes (smaller streams) within Spokane County. This layer represents the polygon version of streams and lakes (larger streams/lakes) within Spokane County.

For assistance with this layer, or to obtain a copy of the GIS Data Dictionary for this layer, please contact:

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UGA Boundaries

This export/shape file is updated monthly.

The UGA is boundary is a parcel based boundary which will replace the IUGA and is consistent with the new GMA comp plan and Capital Facilities Plan. This boundary provides a clear delineation between unincorporated urban and rural services and land uses.

The UGA boundary will become effective when Phase 1 Development Regulations are adopted by the BOC (approx mid December 2001).

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Wetlands

This export/shape file is updated yearly.

These wetlands are only generally identified, and specific detail about their boundaries, function, value, and appropriate buffer zones can only be determined by a field investigation. The wetlands were not field checked. This data was created at a 1 inch to 400 feet scale.

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Streams and Rivers

This export/shape file is updated yearly.

These wetlands are only generally identified, and specific detail about their boundaries, function, value, and appropriate buffer zones can only be determined by a field investigation. The wetlands were not field checked. This data was created at a 1 inch to 400 feet scale.

PR indicates a permanent stream and river
SS indicates a seasonal stream

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